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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of protecting any one of a plurality of optical signals of a multi-wavelength optical signal from failure of an optical component, the method comprising:

optically splitting the multi-wavelength optical signal to obtain a protection portion of the multi-wavelength optical signal comprising protection portions of each of the optical signals;

detecting a failure in the optical component which would affect a particular optical signal of the plurality of optical signals; redirecting around the optical component the protection portion of the multi-wavelength optical signal; and

wavelength filtering the protection portion of the multi-wavelength optical signal to obtain the protection portion of the particular optical signal.

2. (Original) A method according to claim 1 wherein the optical component comprises a dedicated switching fabric, and the step of redirecting comprises inputting the protection portion of the multi-wavelength optical signal through a spare switching fabric.

3. (Original) A method according to claim 2 wherein the step of optically splitting the multi-wavelength optical signal is further to obtain an in-service portion of the multi-wavelength optical signal, the method further comprising the step of:

directing the in-service portion of the multi-wavelength optical signal toward the dedicated switching fabric for switching therethrough.

4. (Original) A method according to claim 3 wherein the step of wavelength filtering

comprises passing the protection portion of the multi-wavelength optical signal through a tunable optical filter, the method further comprising:

optically combining the protection portion of the particular optical signal after it has passed through the tunable optical filter with a second multi-wavelength optical signal from the dedicated switching fabric.

5. (Original) A method according to claim 4 wherein the step of wavelength filtering further comprises:

tapping the protection portion of the particular optical signal after it has been wavelength filtered to obtain an indication of an optical power of the protection portion of the particular optical signal; and

tuning the tunable optical filter with use of the indication of the optical power.

6. (Original) A method according to claim 4 further comprising:

after the step of directing the in-service portion of the multi-wavelength optical signal toward the dedicated switching fabric, demultiplexing the in-service multi-wavelength optical signal into a plurality of in-service optical signals;

passing the plurality of in-service optical signals to the dedicated switching fabric for switching therethrough; and

before the step of optically combining the particular optical signal with the second multi-wavelength optical signal, multiplexing a second plurality of in-service optical signals emerging from the dedicated switching fabric into the second multi-wavelength optical signal.

7. (Original) A method according to claim 1 wherein the failure of the optical component is associated with a stray optical signal emerging from an output of the optical component the particular optical signal would have emerged from had the optical component not failed, the method further comprising:

optically blocking the stray optical signal emerging from the output of the optical component.

8. (Original) A method of protecting any one of a plurality of separate optical signals from failure of an optical component, the method comprising:

optically splitting each of the separate optical signals to obtain a corresponding protection portion of each optical signal;

detecting a failure in the optical component which would affect a particular optical signal of the plurality of optical signals;

multiplexing the plurality of protection portions of each optical signal into a multi-wavelength optical signal;

redirecting around the optical component the multi-wavelength optical signal;

wavelength filtering the multi-wavelength optical signal to obtain the protection portion of the particular optical signal; and

demultiplexing the protection portion of the particular optical signal to further redirect it.

9. (Original) A method according to claim 8 wherein the optical component comprises a dedicated switching fabric, and the step of redirecting comprises inputting the multi-wavelength optical signal through a spare switching fabric.

10. (Original) A method according to claim 9 wherein the step of optically splitting each of the separate optical signals is further to obtain a corresponding in-service portion of each optical signal, the method further comprising the step of:

directing the in-service portions of the optical signals toward the dedicated switching fabric for switching therethrough.

11. (Original) A method according to claim 10 wherein the step of wavelength filtering comprises passing the multi-wavelength optical signal through a tunable optical filter, the method further comprising:

optically combining the protection portion of the particular optical signal after it has been demultiplexed to redirect it along an optical pathway the particular optical signal would have been directed along had the optical component not failed.

12. (Original) A method according to claim 11 wherein the step of wavelength filtering further comprises:

tapping the protection portion of the particular optical signal after it has been wavelength filtered to obtain an indication of an optical power of the protection portion of the particular optical signal; and

tuning the tunable optical filter with use of the indication of the optical power.

13. (Original) A method according to claim 8 wherein the failure of the optical component is associated with a stray optical signal emerging from an output of the optical component the particular optical signal would have emerged from had the optical component not failed, the method further comprising:

optically blocking the stray optical signal emerging from the output of the optical component.

14. (Original) A protection switching arrangement for protecting any one of a plurality of optical signals of a multi-wavelength optical signal from a detected failure of an optical component, the protection switching arrangement comprising:

an optical splitter for optically splitting the multi-wavelength optical signal to obtain a protection portion of the multi-wavelength optical signal comprising protection portions of each of the optical signals;

redirecting means coupled to the optical splitter for redirecting around the optical component the protection portion of the multi-wavelength optical signal; and

a tunable optical filter coupled to the redirecting means for wavelength filtering the protection portion of the multi-wavelength optical signal to obtain the protection portion of any particular optical signal of the plurality of optical signals affected by the failure.

15. (Original) A protection switching arrangement according to claim 14 wherein optically splitting the multi-wavelength optical signal is further to obtain an in-service portion of the multi-wavelength optical signal, wherein the redirecting means comprising a protection optical waveguide for inputting the protection portion of the multi-wavelength optical signal through a spare switching fabric, and wherein the optical component comprises a dedicated switching fabric, the protection switching arrangement further comprising:

an ingress optical waveguide for directing the in-service multi-wavelength optical signal toward the dedicated switching fabric for switching therethrough.

16. (Original) A protection switching arrangement according to claim 15 further comprising:

an optical combiner coupled to an output of the tunable optical filter for optically combining the protection portion of the particular optical signal after it has passed through the tunable optical filter with a second multi-wavelength optical signal from the dedicated switching fabric.

17. (Original) A protection switching arrangement according to claim 16 further comprising:

an optical tap coupled to the output of the tunable optical filter for tapping the protection portion of the particular optical signal after it has been wavelength filtered to obtain an indication of an optical power of the protection portion of the particular optical signal, said indication of the optical power for use in controllably tuning the tunable optical filter.

18. (Original) A protection switching arrangement according to claim 16, the protection switching arrangement further comprising:

a demultiplexer coupled to the ingress optical waveguide for demultiplexing the in-service portion of the multi-wavelength optical signal into a plurality of in-service optical signals;

a plurality of ingress in-service optical waveguides optically coupled to outputs of the demultiplexer for passing the plurality of in-service optical signals to the dedicated switching fabric for switching therethrough; and

a multiplexer for multiplexing a second plurality of in-service optical signals emerging from the dedicated switching fabric into the second multi-wavelength optical signal before it is combined with the protection portion of the particular optical signal.

19. (Original) A protection switching arrangement according to claim 14 wherein the failure of the optical component is associated with a stray optical signal emerging from an output of the optical component the particular optical signal would have emerged from had the optical component not failed, the protection switching arrangement further comprising:

an optical blocker coupled to the output of the optical component for optically blocking the stray optical signal emerging from the output of the optical component.

20. (Original) A protection switching arrangement for protecting any one of a plurality of separate optical signals from a detected failure of an optical component, the protection switching arrangement comprising:

a plurality of optical splitters for optically splitting each of the optical signals to obtain a corresponding protection portion of each optical signal;

a multiplexer coupled to first outputs of the splitters for multiplexing the plurality of protection portions of each optical signal into a multi-wavelength optical signal;

redirecting means coupled to an output of the multiplexer for redirecting around the optical component the multi-wavelength optical signal;

a tunable optical filter coupled to the redirecting means for wavelength filtering the multi-wavelength optical signal to obtain the protection portion of a particular optical signal which would have been affected by the failure; and

a demultiplexer coupled to an output of the tunable optical filter for demultiplexing the protection portion of the particular optical signal to further redirect it.

21. (Original) A protection switching arrangement according to claim 20 wherein optically splitting each of the optical signals is further to obtain a corresponding in-service portion of each optical signal, wherein the redirecting means comprises a protection optical waveguide for inputting the multi-wavelength optical signal through a spare switching fabric, and wherein the optical component comprises a dedicated switching fabric, the protection switching arrangement further comprising:

a plurality of ingress in-service optical waveguides optically coupled to respective second outputs of the splitters for directing the plurality of in-service portions of the optical signals to the dedicated switching fabric for switching therethrough.

22. (Original) A protection switching arrangement according to claim 21 further comprising:

a plurality of optical combiners optically coupled to a plurality of outputs of the demultiplexer for optically combining the protection portion of the particular optical signal after it has been demultiplexed to redirect it along an optical pathway the particular optical signal would have been directed along had the optical component not failed.

23. (Currently amended) A protection switching arrangement according to claim 22 further comprising:

an optical tap optically coupled to the output of the tunable optical filter for tapping the protection portion of the particular optical signal after it has been wavelength filtered to obtain an indication of an optical power of the protection ~~potion~~ portion of the particular optical signal, said indication of the optical power for use in controllably tuning the tunable optical filter.

24. (Original) A protection switching arrangement according to claim 20 wherein the failure of the optical component is associated with a stray optical signal emerging from an output of the optical component the particular optical signal would have emerged from had the optical component not failed, the protection switching arrangement further comprising:

an optical blocker coupled to the output of the optical component for optically blocking the stray optical signal emerging from the output of the optical component.

25. (Original) A method of protecting an optical communication system from an invalid optical signal along a protection pathway, the method comprising:

wavelength filtering access to the optical communication system from the protection pathway such that no invalid optical signals are transmitted to the system from the protection pathway.

26. (Original) A method according to claim 25 wherein the step of wavelength filtering comprises:

interposing a tunable optical filter between the system and the protection pathway; and controllably tuning the filter such that no invalid optical signal passes therethrough.

27. (Currently amended) A protection switching arrangement for protecting an[[,]] optical communication system from an invalid optical signal along a protection pathway, the protection switching arrangement comprising:

a tunable wavelength filter interposed between the system and the protection pathway for wavelength filtering access to the optical communication system from the protection pathway

such that no invalid optical signals are transmitted to the system from the protection pathway.

28. (Original) An ingress trunk line card for use in protecting any one of a plurality of optical signals of a multi-wavelength optical signal from a detected failure of a dedicated switching fabric, the ingress trunk line card comprising:

an optical splitter for optically splitting the multi-wavelength optical signal to obtain a protection portion of the multi-wavelength optical signal comprising protection portions of each of the optical signals; and

redirecting means coupled to the optical splitter for redirecting around the dedicated switching fabric the protection portion of the multi-wavelength optical signal.

29. (Original) An egress trunk line card for use in protecting any one of a plurality of optical signals of a multi-wavelength optical signal from a detected failure of a dedicated switching fabric, the egress trunk line card comprising:

redirecting means for redirecting around the dedicated switching fabric a protection portion of the multi-wavelength optical signal comprising protection portions of each of the optical signals;

a tunable optical filter coupled to the redirecting means for wavelength filtering the protection portion of the multi-wavelength optical signal to obtain the protection portion of a particular optical signal which would have been affected by the failure; and

an optical combiner coupled to an output of the tunable optical filter for optically combining the protection portion of the particular optical signal after it has passed through the tunable optical filter with a second multi-wavelength optical signal from the dedicated switching fabric.

30. (Original) An ingress tributary card for protecting any one of a plurality of separate optical signals from a detected failure of a dedicated switching fabric, the ingress tributary card comprising:

a plurality of optical splitters for optically splitting each of the optical signals to obtain a corresponding protection portion of each optical signal;

a multiplexer coupled to first outputs of the splitters for multiplexing the plurality of protection portions of each optical signal into a multi-wavelength optical signal; and

redirecting means coupled to an output of the multiplexer for redirecting around the dedicated switching fabric the multi-wavelength optical signal.

31. (Original) An egress tributary card for protecting any one of a plurality of separate optical signals from a detected failure of a dedicated switching fabric, the egress tributary card comprising:

redirecting means for redirecting around the dedicated switching fabric a multi-wavelength optical signal comprising protection portions of each of the optical signals;

a tunable optical filter coupled to the redirecting means for wavelength filtering the multi-wavelength optical signal to obtain a protection portion of a particular optical signal which would have been affected by the failure;

a demultiplexer coupled to an output of the tunable optical filter for demultiplexing the protection portion of the particular optical signal to further redirect it; and

a plurality of optical combiners coupled respectively to a plurality of outputs of the demultiplexer for optically combining the protection portion of the particular optical signal after it has been demultiplexed to redirect it along an optical pathway the particular optical signal would have been directed along had the optical component not failed.